# 2<sup>nd</sup> Bioinformatics Resource Centers & 1<sup>st</sup> Inter-Operability Working Group Meetings

# Virginia Bioinformatics Institute Conference Facility, Virginia Tech Blacksburg, VA 24061 May 16-18, 2005

#### May 16, 2005

Meeting Registration: 12:30pm-1pm

Afternoon session: 1pm-5:30pm

1pm-1:20pm Valentina Di Francesco (NIAID), "An update on the BRCs program"

#### 1:20pm – 6pm Annotation

Session chaired by Ross Overbeek (NMPDR)

#### 1:20pm-3:30pm Part I: Presentations from each BRC.

15 minute presentations, including discussion

The intent is for each speaker to give a presentation summarizing their approach to annotation. The objectives of this initial exchange are

- 1. to make everyone aware of the annotation strategies being adopted by the different BRCs,
- 2. to clarify what types of data are being annotated, and
- 3. to draw attention to software tools that are considered useful.
- Ross Overbeek(NMPDR): Introduction to the session
- Rick Stevens & Ross Overbeek (NMPDR) "NMPDR Annotation Strategy: a Summary"
- Guy Plunkett (ERIC)
- Eric Snyder (PATRIC), "PATRIC Genome Curation"
- Jessica Kissinger (ApiDB), "ApiDB Our data types, curation status and analysis pipelines"
- Ewan Birney & Kathryn Campbell (VectorBase) "Strategies for manual annotation of the Anopheles genome"
- Elliot Lefkowitz and Puri Bangalore (VBRC), "The annotation and curation of viral genomes: A combination of automated, manual, and collaborative approaches".
- Richard Scheuermann and Carey Gire (BioHealthBase), "Annotations and hostpathogens interactions"
- Owen White (Pathema)

#### 3:30pm-4pm: Break

#### 4pm-5:30pm Part II

Informal discussions on the following topics:

- Chris Stoeckert (ApiDB), "Approaches to community annotation"
- Rick Stevens (NMPDR), "Encoding Evidence: enabling the reconstruction of inference chains in genome annotation"

 Owen White (Pathema) and Ross Overbeek (NMPDR), Subsystems, genome properties, and controlled vocabulary:

## 6:30pm: Dinner at the Alumni Hall

#### May 17, 2005

#### 8:30am-12:15pm Comparative Genomics

Session chaired by David Roos

All presentations are 20'+5' for discussion.

#### 8:30am – 10:10am Part I: Genome alignments and synteny.

- Stephen Cammer (PATRIC), "Targeted Genomic Comparison and a Focus on Coronaviruses"
- Chris Upton (VBRC), "Viral genome alignments and graphical display"
- Nicole Perna (ERIC), "Whole genome multiple alignments using MAUVE"
- Owen White (Pathema), "Accessing and representing comparative genomics data using Sybil"

#### 10:10am - 10:30 am Break

# 10:30am-11:45am Part II: Other genome sequence comparisons and the identification of orthologous proteins and pathways

- Rick Stevens (NMPDR), "Context annotation using SEED; Analysis of upstream regions"
- Ewan Birney (VectorBase), "Comparison of Aedes with Anopheles"
- David Roos (ApiDB), "Ortholog identification and integrated comparative queries"

#### 11:45am-12:15 pm General Discussion

- what is comparative genomics?
- alignments and synteny analysis: methods, tools, challenges
- ortholog identification and analysis: methods, tools, challenges

#### 12:15pm – 1:15pm Lunch

#### 1:15pm-2:45pm Sequence polymorphisms identification.

Session chaired by Steven Salzberg

- Fred Blattner (ERIC), "Storage of primary sequence read data: Is it cost effective?" (15 minutes)
- Steven Salzberg (Pathema), "Fine-scale sequence polymorphisms and genome assembly" (30 minutes)
- Ross Overbeek (NMPDR) (30 minutes), "The NMPDR Approach to Characterization of Variation in Closely Related Genomes"

2:30pm-2:45pm discussion

#### 2:45pm-3pm Break

#### 3pm-4:20pm Other tools and approaches.

Session chaired by Valentina Di Francesco All presentations are 15'+5' for discussion

- Tatiana Tatusov (NCBI), "Proposal to promote improved bacterial genomes"
- John Greene (ERIC), "The mAdb system for microarray data"
- Dana Eckart (PATRIC), "Integrating Distributed Information: The ToolBus/PathPort System"
- Richard Scheuermann & Carey Gire (BioHealthBase), "BioHealthBase development approach"

## 4:30pm - 6pm PATRIC web site demo and Tour of VBI facilities

## May 18, 2005

# 8:30am – noon Inter-Operability Working Group Meeting

Session chaired by Owen White

This session consists of a discussion that will focus on the following topics:

- API development, ability for users to download and install
- common repository, types of data that would not be expensive
- common web interface
- use of the BRC-devel site
- shared tools and coding practices
- Sharing of datasets (e.g SNPs, pathways) across BRCs

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